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10/525,254

07/13/2005

Claus Holm

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EXAMINER

GREENE, JASON M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

02/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/525,254 | Applicant(s) HOLM ET AL. | |
| | Examiner Jason M. Greene | Art Unit 1797 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 15-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/22/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-19, 23-25 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Frei et al. (US 4,965,101).

Frei et al. discloses a motor vehicle including a particulate filter comprising a housing (inherent) with at least one gas inlet and at least one gas outlet, and a filter body in the housing, the filter body being formed by using a semiconductor technology type micro-patterning process, wherein the micro-patterning process comprises an etching process and a patterned deposition (CVD) process, wherein the internal cavities are of differing dimensions, wherein the filter body at least partially comprises electrically conductive material (the Si₃N₄, SiC, zirconia and alumina deposits), wherein the electrically conductive material forms regions of differing specific conductivity (due to variations in the deposits), wherein the filter body at least in part comprises a silicon compound (the SiC deposits), wherein the filter body has an oxide layer (the zirconia

and alumina deposits), and wherein the filter body is made of sintered cordierite or aluminum titanate in Figs .1-4 and col. 1, line 41 to col. 3, line 66.

3. Claims 15, 16, 19-24 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hendricks et al. (US 5,510,194).

Hendricks et al. discloses a particulate filter (32) usable for a motor vehicle comprising a housing (38) with at least one gas inlet (41) and at least one gas outlet (43), and a filter body (34) in the housing, the filter body being formed by using a semiconductor technology type micro-patterning process, wherein the micro-patterning process comprises an etching process, wherein the internal cavities are of differing dimensions in which the dimensions of the cavities constantly decrease in the direction of flow, wherein the dimensions of the cavities remain constant for pre-selected parts of the filter body (in each plate), wherein the filter body at least partially comprises electrically conductive material (copper, stainless steel, nickel and silver), wherein the electrically conductive material forms regions of differing specific conductivity (due to the differing size of the cavities) in Figs. 1 and 4 and col. 4, line 58 to col. 8, line 3.

With regard to the particulate filter being for a motor vehicle, intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530 (CCPA 1971). Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666 (PTO Board of Appeals 1969). Inclusion of the

material worked upon by a structure being claimed does not impart patentability to the claims, *In re Otto et al.*, 136 USPQ 458 (CCPA 1963). A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of that claimed, *Ex parte Masham*, 2 USPQ 2d 1647 (PTO Board of Appeals 1987).

4. Claims 15-18, 23, 24 and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Van Rijn (US 5,543,046).

Van Rijn discloses a particulate filter usable for a motor vehicle comprising a housing (inherent) with at least one gas inlet and at least one gas outlet, and a filter body (1,2) in the housing, the filter body being formed by using a semiconductor technology type micro-patterning process, wherein the micro-patterning process comprises an etching process and a patterned deposition (CVD) process, wherein the filter body at least partially comprises electrically conductive material (the alumina substrate and silicon or silicon carbide membrane layer), wherein the filter body at least in part comprises silicon or silicon carbide, and wherein at least part of the filter body has an oxide layer (the alumina substrate) in Figs. 1-16 and col. 1, line 51 to col. 6, line 12.

With regard to the particulate filter being for a motor vehicle, intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530 (CCPA 1971). Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during

intended operation are not significant in determining patentability of an apparatus claim, Ex parte Thibault, 164 USPQ 666 (PTO Board of Appeals 1969). Inclusion of the material worked upon by a structure being claimed does not impart patentability to the claims, In re Otto et al., 136 USPQ 458 (CCPA 1963). A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of that claimed, Ex parte Masham, 2 USPQ 2d 1647 (PTO Board of Appeals 1987).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frei et al. (US 4,965,101) in view of Debenedetti et al. (US 6,773,479 B2).

Frei et al. does not disclose at least part of the filter body having a catalytically active coating, but Debenedetti et al. discloses depositing an oxidation catalyst on a similar diesel particulate filter in Figs. 1-4 and col. 4, lines 25-37.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the oxidation catalyst coating of Debenedetti et al.

into the filter body of Frei et al. to oxidize contaminants in the engine exhaust gas and to lower the oxidation temperature of collected soot particulates, as suggested by Debenedetti et al. in col. 4, lines 25-37 and as is well known in the art.

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. (US 5,510,194) or Van Rijn (US 5,543,046) in view of Frei et al. (US 4,965,101).

Hendricks et al. and Van Rijn do not teach a vehicle including the particulate filter, but Frei et al. teaches using the particulate in a motor vehicle in Figs.1-4 and col. 1, line 41 to col. 3, line 66.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the particulate filters of Hendricks et al. and Van Rijn in a vehicle since such is a well known application for ceramic and metallic particulate filters.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Gulvin, Northrup et al., Hodgson et al., Knol and Brück references disclose similar filters.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Greene whose telephone number is (571) 272-1157. The examiner can normally be reached on Monday - Friday (9:00 AM to 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason M. Greene
Primary Examiner
Art Unit 1797

/Jason M. Greene/
2/17/08

jmg
February 17, 2008